IN THE SPECIFICATION:

Page 15, amend the paragraph beginning on line 23 to read as follows:

On a side wall 102 of the processing chamber 100, a jacket 103 for controlling the temperature of the inner surface of the side wall is held in the exchangeable state. A heat exchanging medium is circulated and supplied into the jacket 103 from a heat exchanging medium supply means 104 so as to control the temperature. The temperature of the jacket is controlled by a temperature controller (not shown in the drawings) with the accuracy of less than ±10°C within a range from 0°C to 100°C, desirably from 20°C to 80°C. On the other hand, the processing chamber 100 is evacuated by an evacuation system 106 connected to a vacuum chamber 105 and the inside of the processing chamber 100 is adjusted to a predetermined processing pressure within a range from 0.1 Pa to 10 Pa, desirably from 0.5 Pa to 4 Pa. The processing chamber 100 and the vacuum chamber 105 are set at the grounding potential. With respect to the side wall 102 of the processing chamber 100 and the jacket 103, the surface treatment such as plasma resistant anodized aluminum may be carried out on the surface thereof as a thermally conductive nonmagnetic metallic material including no heavy metal, for example, such as aluminum.

Page 21, amend the paragraph beginning on line 16 to read as follows.

The inventors have experimented with an object of oxide film etching at a pressure of 2 Pa using a mixed gas series of C4F8 and Ar as a processing gas and as a result of it, we have found that when the inner wall surface temperature in the reactor is controlled to a constant temperature which is sufficiently lower than the temperature (about 100°C) of a wafer with the accuracy of less than ±10°C within a range from 25°C to 80°C by a temperature controller which is not shown in the drawings, a strong coating film is formed on the inner wall surface. Within a pressure

range of several tens mtorr max. (several Pa max.) like this, ions of high energy increase, so that it can be considered that the ion assist effect in film deposition is increased and a tight film is formed. The condition of a deposited film is such that when the side wall temperature is low, a fine and strong film is formed and when the side wall temperature is high, a slightly rough film is formed. To make this change of film characteristic quantitatively clear, the composition (element density ratio) of a film deposited at a side wall temperature of each of 25°C, 50°C, and 80°C has been analyzed by the XPS (X-ray photoelectron spectroscopy) and the following results have been obtained.

Page 28, amend the paragraph beginning on line 28 to read as follows.

The width w of the part of the ring 116 to which the bias power is applied is set to, for example, 10 mm or more so that the part can be efficiently heated by the bias power. The thickness of the ring 116 is set to, for example, 6 mm or less, desirably 4 mm or less so as to be validly heated by the bias power. When the shape is made thinner like this, the heat capacity of the ring 115 is made smaller. As a result, the whole ring can be heated almost within a range from 100°C to 250°C, desirably from 150°C to 200°C, which control is effected by a temperature controller which is not shown in the drawings. As a result, the deposition of reaction products is controlled and the occurrence of foreign substances due to peeling of reaction products can be reduced. Within this temperature range, the change in surface reaction is not sensitive to the change in temperature compared with that in a high temperature zone of about 250°C or more, so that there is an advantage that the temperature change in component parts can be made smaller to such a level that will not substantially affect the process.